



CREATING AN ENERGY AWARENESS PROGRAM

A HANDBOOK FOR
FEDERAL ENERGY
MANAGERS



Office of Energy Efficiency
and Renewable Energy

U.S. Department of Energy



FEDERAL ENERGY MANAGEMENT PROGRAM

The Federal government is the single largest domestic user of energy, spending more than \$9 billion to power its vehicles, operations, and approximately 500,000 facilities throughout the United States. Federal agencies impact every energy-consuming sector of our economy—commercial, industrial, residential, agricultural, and transportation.

Efficient energy management at Federal facilities and operations:

- Saves taxpayers money;
- Reduces greenhouse gas emissions;
- Protects the environment and natural resources; and
- Contributes to the preservation of our national security.

FEMP helps agencies meet legislative requirements, Presidential directives, and their energy management goals by creating partnerships, leveraging resources, transferring technology, and providing training and technical guidance and assistance. These activities support Executive Orders 13123, 13221, and other Executive Orders and Presidential Directives and relevant laws. (www.eren.doe.gov/femp/resources/legislation.html)

As stated in the Presidential Directive on Energy Conservation at Federal Facilities, "...the Federal government should set a good example of conservation by reducing its own energy use...".

Lead By Example is FEMP's slogan for Federal agencies to show positive action toward energy awareness, conservation, and efficiency. It is also a key to mitigating the adverse budgetary and operational impact of the current energy situation.

FEMP has developed this guidebook to support your efforts in hopes that you will use it to reduce energy shortages and lower our reliance on energy imports.

Acknowledgements

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FEMP Director Beth Shearer greets many people who enthusiastically want to find out more about saving energy in their own offices and homes.



“FEMP will continue to provide timely guidance, education, technical advice, and outreach materials as we reaffirm our commitment to Lead By Example.”

*- Beth Shearer, Director
Federal Energy Management Program*

INTRODUCTION

Why Federal Energy Awareness is Important

As a Federal Energy Coordinator, you already know that energy efficiency is good for you, good for your agency, and good for the nation and the world. You understand the inter-relationship between energy, the economy, and the environment. You know from experience that energy-efficient buildings are healthier places to work and can increase the comfort and productivity of employees. Even so, efforts to adopt energy-efficient equipment and maintenance and operations practices can be challenging.

Perhaps an even more difficult challenge is to instill energy efficiency as a fundamental value in your organization. People tend to take energy for granted, and many are unaware of the opportunities they have to reduce energy use. Some may claim to favor energy efficiency, but do not follow through when it comes to changing their own behaviors. Nevertheless, meeting the challenge of developing a program aimed at changing behaviors has been shown to have productive results. Along with helping you meet your energy management goals, saving taxpayer dollars, and protecting the environment, benefits specific to your facility and employees include:

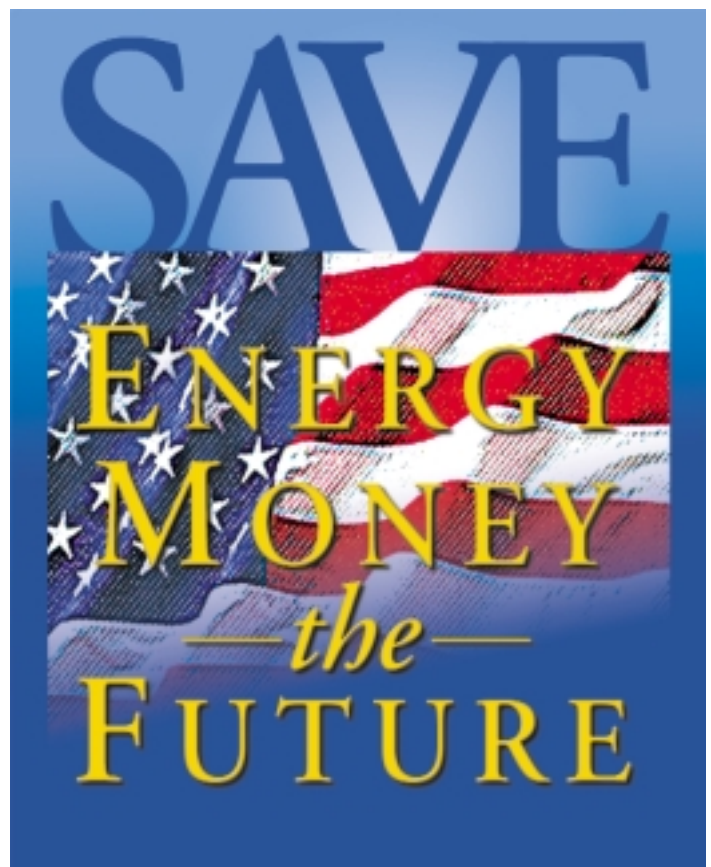
- Improving agency operations and increasing employee productivity;
- Directing resources to other mission-critical activities;
- Transferring energy and money-saving activities to home and recreation; and
- Serving as a positive model of energy savings for other Federal facilities.

Two-pilot projects conducted by FEMP demonstrate that behavior-based programs can help reduce energy use and expenditures. These programs targeted families in military housing. Military residents do not pay their own utility bills, so the reductions in energy use experienced at both sites resulted purely from behavioral changes—not from monetary gain. At Fort Lewis, Washington, the pilot project ran for one year. The total energy savings in family housing was 10% on a weather-corrected basis, exceeding the campaign goal of 3%. Cost savings were over \$130,000 for the year. At the Marine Corps Air Station (MCAS) in Yuma, Arizona, the campaign ran for only three months of the summer cooling season. However,

energy use still dipped 13% in the last month of the campaign, and the housing manager ended the year with a \$50,000 surplus.¹

Using the insights gained from these two projects and other research on energy-efficient behavior, this handbook will provide a step-by-step approach to help you design and implement a program aimed at increasing energy-efficient behavior of employees at your own facility. The following page outlines the critical steps to achieve your awareness goals and will guide you through the remaining chapters. Read from the beginning for a comprehensive approach, or flip to the sections you are interested in for greater detail.

Even if you have an outreach program in place, this guidebook contains valuable ideas and approaches that you may not have tried before!



¹ Descriptions of the campaigns and activities at Fort Lewis, WA and MCAS Yuma, AZ may be found in the *Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing*. To obtain a copy, please visit www.eren.doe.gov/femp/yhttp/strategies.html or call 1-800-363-3732.

KEY STEPS FOR A SUCCESSFUL ENERGY AWARENESS PROGRAM

Step One Plan the Effort

- Define your agency's mission and goals. Establish a direct relationship between saving energy and success in meeting these goals.
- Assess the constraints and opportunities of your facility. Evaluate energy use patterns based on your types of equipment, size of staff, hours of operation, and current levels of energy use. Use this information to ensure that you develop obtainable goals and plan activities well-suited to your organization's needs.
- Determine the specific goals and objectives of your awareness program.
- Obtain upper management support. Ask a Senior Manager to serve as the facility's "Energy Champion" to lend authority and endorse the program's messages.
- Recruit enthusiastic and capable team members to serve on your planning committee.
- Assess your access to various communications channels (such as newsletters, closed circuit TV, etc.) and program capability to produce printed materials, displays, videos, and hand-outs.
- Assess your financial resources and develop a preliminary budget.
- Examine existing links with institutional groups and others that can help promote your program.
- Consider an evaluation mechanism for gathering behavioral data and reporting program results.

Step Two Design and Implement the Program

- Solicit input from employees to develop program content via surveys, focus groups, and personal interviews.
- Identify the desired behaviors/actions and consider how you will motivate employees to take these actions, such as through incentives and awards.
- Develop motivational themes, messages, and slogans.

- Determine the communications channels you will use to convey your information (e.g., posters, video, newsletter, exhibit).
- Select the activities/methods you will employ to distribute the messages/information.
- Develop a new budget specific to the products you plan to develop and the activities in which you plan to participate.
- Develop a schedule based on a specific timeframe (e.g., one fiscal year) to help you produce your products in plenty of time to carry out planned activities.
- Produce your visuals, products, and materials and conduct activities.

Step Three Evaluate and Report Results

- Obtain employee feedback on the program's effectiveness through focus groups and surveys. Consider a mid-course evaluation as well as a final evaluation.
- Document the energy and water savings. Share results based on measures implemented and employee achievements.

Step Four Sustain the Effort

- Develop ways of introducing new employees to the program, such as an informational video, personal interview, or employee awareness handbook.
- Continue to implement your incentive and awards programs and publicly recognize employee accomplishments.
- Ask employees to pledge their commitment to specific personal actions or new events to promote and encourage ongoing participation.
- Recruit new members and conduct regular meetings with your planning committee. Continue to plan your program into the next year.

PLAN THE EFFORT

Understand Your Setting

Before you can design a program that will raise energy awareness at your facility, you need to understand your constraints and opportunities. This is critical to establish realistic and workable goals and objectives for your particular situation. Your team first must fully understand policies and practices that may affect energy behaviors. For example, local policy may require night time lighting for security purposes, and some equipment may need to run continuously. Here are a few areas to consider:

- Characterize your facility's staff, e.g., the size of the staff and the type of work activities they perform.
- Conduct a survey of the type of equipment used, e.g., typical office equipment, energy-intensive laboratory or industrial equipment, outdoor energy needs, and off-road vehicles.
- Determine hours of operation for equipment, e.g., regular daytime hours, 8-10 hour shifts, 24 hours a day.
- Review energy and water utility bills and transportation fuel consumption by type, e.g., electric, natural gas, gasoline, alternative fuels.



Establish Goals and Objectives

Goals are the ultimate desired outcomes. In a behavior-based program, a typical goal is to motivate people to actually modify their habits so that energy use is reduced by a certain amount over a specified time period. The target reduction may be based on various factors, including Executive Orders, Federal energy management goals, or agency-specific goals. Objectives might include matching behavior-based reductions achieved in other areas of the department or facility.

Set program goals while keeping in mind available resources and time to carry out the program. Getting people to change their behaviors is challenging, usually requiring time to make the changed behavior habitual. It would be unrealistic, for example, to expect residents to use 20% less energy over a three-month time period based solely on changes in personal behaviors.

Choose your goals carefully and make sure they are measurable. For example, you may not be able to measure natural gas usage in a way that will allow you to set a target of reduced gas usage. However, if every building has separate electricity meters, reductions in electricity use may be able to be directly attributed to your awareness program. Other factors that may affect energy use, including weather, equipment upgrades, occupancy, and turnover, will need to be accounted for when determining whether or not the target goals were achieved.

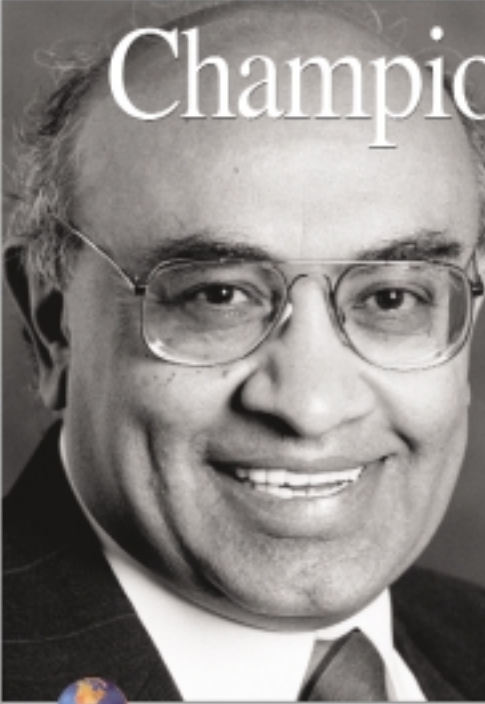
Assess Your Resources

To initiate, restart, or continue efforts to instill energy-efficient behavior at your facility, you will need to objectively assess the resources that are currently available in order to design a program that will make the most of them. Perhaps the most important are staff members who are already interested in and practicing energy efficiency. With enthusiastic individuals on board, you can craft approaches that will be effective for your situation, recognizing that infrastructural, organizational, and cultural differences usually call for different strategies.


Champions

You, as Energy Coordinator, will lead the effort, but the enthusiasm and endorsement of your organization's top management are also important. In order to get management approval for your program, it may be necessary to outline mission-critical activities related to

Champion





Twenty-First Century Citizenship is being championed by mechanical engineers like Harry Gotsis of the U.S. Army Corps of Engineers who, by overseeing the development of USPC contract guidance, incorporating new requirements into training programs, managing Army-wide audit contracts, and managing the Army's energy reporting system, is helping save millions of dollars each year.



YOU HAVE the POWER™

United States Department of the Army
Federal Energy Management Program

Pathfinders



Twenty-First Century Citizenship is being championed by system analysts, accounting analysts, and computer specialists like Penny Polizzi, Anna Poff, and Cheryl Amodeo of the Coast Guard Finance Center who, by designing and implementing energy tracking and payment software applications, are helping the Coast Guard save hundreds of thousands of dollars each year.



YOU HAVE the POWER™

United States Department of Transportation
Federal Energy Management Program




Leader



Twenty-First Century Citizenship is being championed by facility managers like Lucinda Harris of the Indian Health Service who, by implementing a sound preventive maintenance program at the San Xavier Indian Health Center Campus in Tucson, Arizona, is helping IHS save \$44,000 in annual energy and maintenance costs.

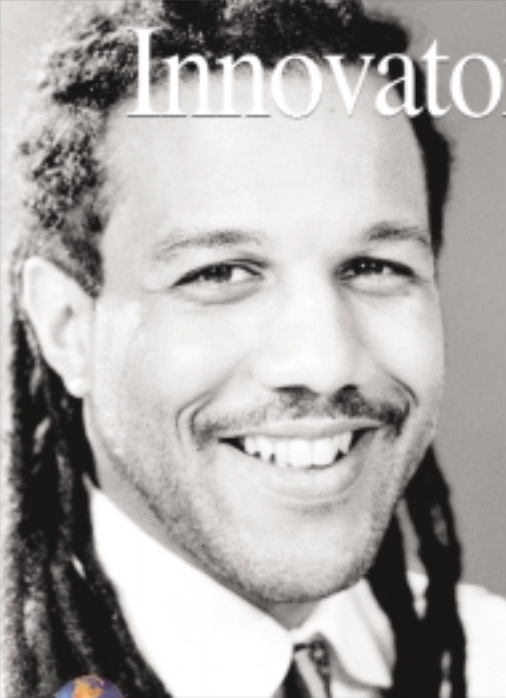


YOU HAVE the POWER™


U.S. Department of Health and Human Services
Federal Energy Management Program




Innovator





Twenty-First Century Citizenship is being championed by energy engineers like Richard Cox who, by managing utility partnership programs, is helping the Bronx VA Medical Center save more than \$1 million dollars over the next 7 years.



YOU HAVE the POWER™

United States Department of Veterans Affairs
Federal Energy Management Program

energy efficiency and awareness. You must be prepared to make a convincing argument. Often, what makes the most sense is dollars and cents.

Once leadership is on board, they will be able to clear the way to use official communication channels and lend their authority to the messages of the program. Studies show that an “energy champion” who personally endorses your messages is crucial to success. This champion could be your highest ranking official or another well-respected person, such as yourself.

Your Team

The team members you recruit need enthusiasm more than anything else. Their ability to communicate and work well with others, including high ranking officials, will be the key to success. Your team should also include people with specialized skills, such as experience conducting focus groups, marketing, writing and editing, graphic design, producing

informational materials, and evaluating programs. You may decide to engage the services of outside consultants and contractors, but a core group of on-site people is essential to an effective site-specific campaign. This group can help design the program, convene focus groups, communicate with others about program activities, and serve as points of contact and behavior models.

At least one team member needs to monitor the facility’s existing channels of communication, including newspapers or newsletters, radio, closed-circuit TV, Web sites, as well as any specialized methods for communicating, such as all-hands and staff meetings.

Another important resource is production capability. Depending on your program’s specific activities, facilities and capabilities must be available (either in-house or through a contractor) for producing all types of printed materials, displays, and videotapes. You may find that your public affairs or training offices have resources to assist you.



Finances/Budget

It is likely that you will need some funding, although many individuals will volunteer their time and you may be able to use materials donated from other organizations. The amount will depend on the products and activities you decide to pursue. Both in-kind support and funding demonstrate your organization's commitment to energy-efficiency and top management's endorsement of your efforts. A preliminary budget describing each expense and its purpose should be approved by all funding sources in advance. Examples of specific budget items are included under "Designing and Implementing the Program" on page 15.

To increase your program's effectiveness, you may wish to offer incentives. For example, an organization may be permitted to reallocate some portion of saved energy costs to office improvements or a community event. To implement incentives, you must have top management approval and ensure that funds may be transferred from one use to another.

Links

Often the Federal government is a major employer and thus an influential member of the community. If your organization has existing links with industry, educational, environmental, or similar groups, the energy awareness program may strengthen these links. Studies have shown such links to be influential in promoting change inside and outside a facility as energy efficiency becomes a value held publicly. However, you must have points of contact and approvals in place, especially for coordination with outside groups.

Evaluation

It is also important to demonstrate up front what you can accomplish through energy efficient behavior. Thus, you will need an evaluation mechanism. Although general published data may be used as examples (e.g., to calculate the savings when a person decides to carpool instead of driving separately), actual energy use data specific to your facility will be the most convincing. Savings measured in therms or MBtus and dollar savings carry powerful messages.

DESIGN AND IMPLEMENT THE PROGRAM

After you have assessed your resources, evaluated the opportunities and constraints of your facility, and established your goals, you and your team can design and implement a successful program for energy efficient behavior. This section contains sample guidelines that should be adapted to suit your particular situation. The most successful awareness programs are tailored to specific organizations and facilities. Develop and disseminate information materials and plan activities that target behaviors your team has identified. Don't try to do too much at once, and make each activity count.

Gather Input from Staff, Management, and Others

Using input from staff to design the program is important for several reasons. First, it ensures that the program's content, themes, activities, and communication channels are valid and appropriate for the target audience. It will do no good to emphasize proper use of air conditioning equipment if staff members have no control over the settings. If people will resent energy audits of their offices or laboratories, do not make this a program activity. If, however, people seem receptive to educational activities including those that involve their children, this could become an emphasis. If many tell

you they acquire most of their information via the in-house newsletter or Web cast, use these mechanisms as major communication channels for the program.

The second reason to involve staff members is that more involvement up front will encourage buy-in and participation as the program gets underway. If staff members have been involved in designing the program, they are more likely to feel a part of it and want it to succeed.

Staff members may also act as individual points of contact that can be consulted as the program continues. Because these individuals have already expressed enough interest to contribute ideas in the planning process, they may be willing to continue to contribute in other ways later. For example, you may call on them to help distribute information, participate in events, contribute energy-saving tips for publication, help develop educational programs, poll other staff members, and so on.

You may seek formal input from staff via surveys, focus groups, and personal interviews.

Surveys

A pre-survey of staff members requires time, funding, and the expertise to design and analyze the survey. Such a survey can be useful in four ways.

First, you can use survey results to design the program. Staff members can be asked about their current energy-use practices (control of temperature settings, use of window coverings and fans, lighting, etc.) and actions they are already taking to be energy efficient. This information can then be used to help identify desired behaviors and actions to emphasize in the program.

Second, the pre-survey can be used to gather the same types of information you might otherwise gather through focus groups (see below), such as opinions on communications channels, logos and slogans, and possible incentives.

The third use of a pre-survey is a "pretest"—a baseline for later comparison and evaluation with a post-survey. Using this approach, you may compare responses about energy-use behaviors both before and after the campaign to help you evaluate the effectiveness of the campaign in changing people's values and habits. When considering a pre-test survey, remember that it is less effective if the resident turnover rate is significant



or occupancy is likely to vary considerably. In these situations, many people who initially filled out the survey will not be the same population surveyed at the end, thus invalidating the comparison.

A fourth use of the pre-survey is to initiate and introduce the behaviors you are targeting for change. By asking people if they are already taking actions to save energy, you are also educating them about what those actions are and implying that some are better or more important than others. In this way, you actually begin your program with the pre-survey.

One survey can serve any or all of these purposes, but you need to ensure that the survey will not be too long or complex, either for people to complete or for you to analyze. See Appendix I for tips on designing a survey. For examples of energy surveys for family housing used by Fort Lewis and MCAS Yuma, please see Appendix C of the *Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing* at: www.eren.doe.gov/femp/yhttp/pdfs/military_hndbk_3.pdf.

Focus Groups

Small discussion groups or focus groups are helpful in gathering more detailed information from staff. You may recruit for focus groups via your team members and a general notice, or you may be able to “piggy-back” the group onto the end of an existing meeting to avoid having to seek volunteers or schedule a special-purpose meeting.

The following general questions may be adapted for particular sites:

- What is the best way to get people interested and involved in saving energy?
- Here are some things we are asking people to do to use energy wisely. Are any of these unreasonable? If so, why?
- Would you be interested in being in a training video or participating in energy awareness events?
- What are the best ways to communicate program results?
- How should energy-efficiency gains be depicted?
- Do you have any other suggestions for us as we plan this program?

Interviews

Personal interviews work very well for obtaining input from top management and facilities and maintenance managers. These people should help you scrutinize your plan and provide comments on what actions should and should not be taken by individual employees, what staff members are responsible for, and the responsibilities of different departments.

Ask them the same questions you ask staff members, but in addition, ask them, “Are there any political sensitivities, constraints, or additional necessary approvals we should be aware of in carrying out this program?” This is also a good time to ask if they would agree to be spokespersons for the program and/or how they will endorse it. Further, discuss the details of any financial incentive or other awards to be provided by top management. You must understand the exact nature of the incentive so you can communicate it in a way that properly represents the intention of those giving it.

Public Affairs staff and others responsible for communications, such as newspaper or newsletter editors, in-house TV and radio studio staff, and Web site managers, should also be interviewed. You will want to understand their requirements, deadlines, and approval processes.



Identify Desired Behaviors

Using the results of surveys, focus groups, and interviews you conducted, identify the energy-saving actions you will ask staff members to take. The following is a partial list of actions that may be appropriate:

- Keep the thermostat at 75-76°F year round.

- Keep blinds or curtains drawn during a hot summer day; open them during the sunny part of a winter day.
- Make sure floor or wall vents are not blocked by furniture or other obstructions.
- Use daylight instead of electric light whenever possible.
- Turn out lights when you leave your office for more than a few minutes.
- Avoid using space heaters.
- Join ridesharing programs or use public transportation.
- Take advantage of work-at-home policies.
- Use phone, Internet, and video-conferences rather than traveling to meetings.
- Turn off office machines overnight.
- Share printers and fax machines instead of purchasing separate ones for each person.
- Turn off water taps when water is not being used; report all leaks promptly.
- Set refrigerator temperature to 38°F and the freezer to 0-5°F.

Once you have a list of possible actions, you need to evaluate and prioritize them.

- Make sure the actions are allowable, feasible, and reasonable for staff to follow.
- Choose only 5-10 actions. Asking people to do too many things confuses them, and the list may appear too daunting.
- Group the actions by topic: temperature, lighting, water use, etc. Or group by areas: i.e., office, lab, kitchen, rest room.
- Include behaviors that are simple and easy to adopt.
- Emphasize the actions that will save the most energy by listing them first. In most cases, these will be actions related to heating and cooling, including preventing loss of heated air to the outside. Studies have shown that people typically

underestimate the energy-saving potential of some measures (insulation, for example) and overestimate the savings of others (such as turning off lights).

Identify What Motivates People

Before deciding how to convey the desired behaviors you have chosen, it is important to consider what motivates individuals to change their behaviors. A common mistake is to assume that people will adopt energy-efficient practices simply if they understand the need to conserve energy, believe that energy efficiency is important, and know what actions to take. Many studies conducted over the last 30 years have shown that these factors alone are not enough to change behavior. If your program is based solely on giving information to people, it will almost certainly fail.

Changing people's energy-use behaviors must go beyond one-way education. The campaign must address barriers to change, as well as making the behaviors easy, convenient, relevant, and socially desirable. Research and case studies have revealed some factors that have proven effective:



Make your contacts personal and interactive. Face-to-face, back-and-forth communication is one of the most effective motivators in energy education. When people are personally confronted with an opportunity to adopt more energy-efficient behavior, as opposed to having the opportunity presented through information materials or the media, their participation rises dramatically. Office visits that yield specific suggestions and offer help may be extremely effective, especially when the visitors follow up to assess, solve problems, and encourage continuing change.

Use vivid, relevant, personalized information.

Information that is presented in a vivid way is more likely to prompt action than a standard list of tips or numbers. If the desired behaviors are pictured, people are more likely to visualize themselves doing them. Videotapes of people taking energy-efficient actions in their homes and offices have prompted similar actions by viewers, even after only one viewing.

Emphasize a positive gain, not deprivation.

People naturally avoid and resent hardship and the implication that they are being asked to sacrifice their comfort to save energy. Therefore, emphasize what they will gain from adopting certain behaviors. For example, the most important factor in energy-related activities is thermal comfort. People resist doing things that make them feel uncomfortably cold or hot, even if they save energy, but are more receptive to things that will improve their comfort and health and give them a sense of control over their environment. Make it clear how certain activities, such as adjusting the temperature to be more seasonal and using daylight instead of electric lights will improve their well-being and convenience.

Encourage active involvement and commitment.

When people decide on which actions to take after talking with someone about their energy choices, they are more likely to carry out those actions—particularly if they sign an action plan to show their commitment. A public, written commitment is more effective than a verbal one. You can encourage public commitments by displaying or publishing the names of people who have pledged to undertake various actions.

Provide incentives. An incentive may take the form of a monetary reward, award plaque or certificate of recognition, or it may be as simple as a refrigerator magnet, inscribed pen, or coffee cup. In fact, some studies have shown that low-cost, ongoing incentives are associated with long-term change. A large, one-time award tends to mark the end of a “special” effort (and the start of diminishing energy behaviors), while a smaller incentive tends to keep the focus on the individual’s choice to change.

Promote social interaction. Community meetings and other events may be used to conduct focus groups that design and evaluate the program, but also to help foster



exchanges of information. Organizational leaders can make energy efficiency a high-status activity. Workshops, kids’ events, fairs, and other activities can be the means to promote energy-efficient behaviors.

Consider using competition. Competition among similar groups has been shown to motivate behavior changes. For competition to work, people must perceive that the comparison is fair and that groups are equivalent in factors that affect energy use. In addition, as many group members as possible must be aware of where they stand in comparison with others. Individuals must feel that their actions make a difference in the entire group’s outcome.

Promote energy-efficient behavior in conjunction with other environmental programs. Existing programs, such as pollution prevention, waste minimization, and recycling can, in association with each other, build a culture that is mindful of environmental conditions. Studies show that people often do not separate these activities, but feel that they all contribute equally to better places to live and work and a healthier planet.

Connect energy-efficient behavior on the job with the rest of their lives. Although you may only be able to observe and measure what employees do in the workplace, promoting energy-efficient behavior at home and on the way to work will have positive effects for workplace attitudes and behavior.

Provide feedback. Feedback provides people with results and successes, and actually shows how much energy they have saved over certain periods of time. Feedback also helps people visualize the results of their actions, which is important because energy-saving results are often invisible or difficult for building occupants to evaluate.

Develop Themes and Messaging

After considering what motivates people, and based on the behaviors you have identified, you must develop messages that will provide a “hook” on which to hang the program. Messages are statements that provide the basis for action. Staff members should relate to, believe, and be motivated by the messages. Here are some examples:

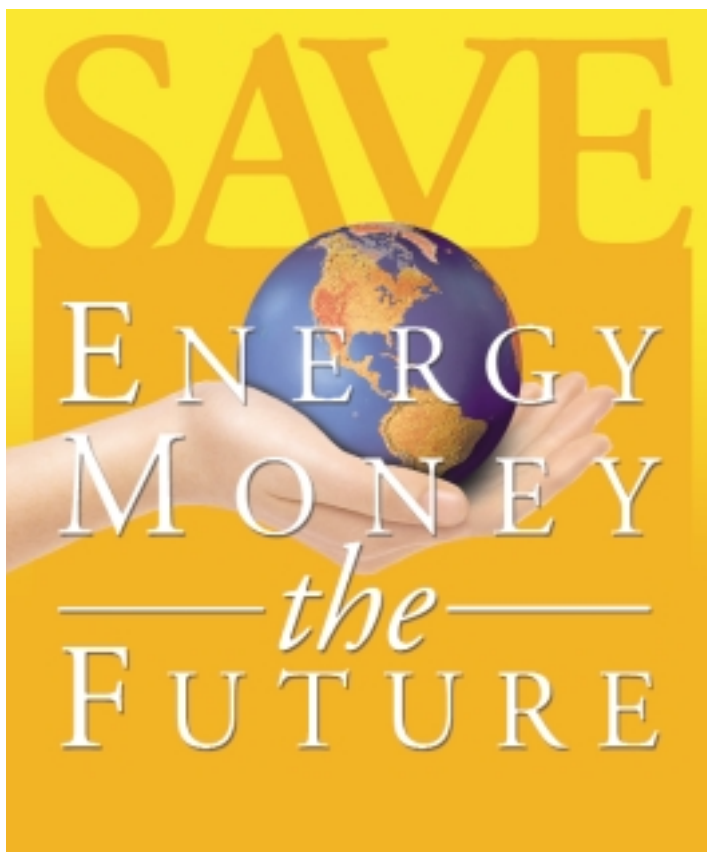
Save energy – it’s easy as 1, 2, 3.

Energy efficiency – it’s a good habit to get into.

Save energy – it’s the right thing to do.

Messages do not always have to be stated explicitly in the program, but they underlie information materials, visuals, and activities of the program. If your messages are that it is easy to be energy-efficient and others are there to help, program materials might show coworkers turning out lights in their offices and offering desk audits. Listing the phone numbers of energy coordinators who can answer questions sends the same message, as does holding workshops and open houses to demonstrate certain actions.

Messages in turn form the basis for themes or slogans—short, catchy, inspirational phrases that are often repeated throughout a campaign. A slogan often appears with a logo or other identifying visual. When people see the slogan and visual together, they will associate it with your program and saving energy. See Appendix II for information about FEMP’s “You Have the Power” campaign and artwork that you can use.



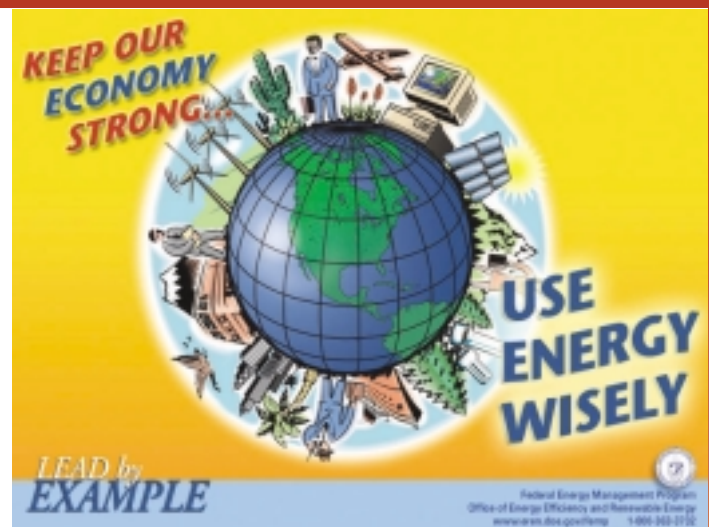
Choose Communications Channels

You will need to identify the communications channels to use in your program, as well as when and how you will use them. Effective channels take many forms and will vary from site to site. Choosing the best communications channels will depend on the input you obtained from surveys, focus groups, and interviews, as well as the types of information you wish to convey. Information may fit into several categories.

Campaign and program description. These materials are intended to introduce the program

and raise awareness among staff members about the campaign, incentives, staff roles, and time frame. Information should include names, phone numbers, and E-mail addresses of program managers (you and your team members) and other resource people. This information may be well-suited to print in a tri-fold brochure or an in-house newsletter.

Information about targeted behaviors. The desired energy saving actions should be conveyed in many different ways to reinforce them and to ensure that as many people as possible become aware of them. Posters may be hung in heavily traveled areas, bookmarks distributed to individuals, and other items such as magnets or light switch plate covers handed out at energy fairs or brown bag discussions.



Progress by staff members. Giving regular feedback on progress toward your goal is also important, as it will provide tangible results of staff efforts and reinforce behavior changes. Posters, flyers, newsletter articles, and E-mail messages may be appropriate channels. When developing visuals for this type of information, it is critical to use a format that is easy for staff members to understand. Bar charts, pie

charts, and other visual formats are better than providing numbers only. Show trends and comparisons, not just a new number each time. If you are aiming for a specific goal, consider showing progress toward that goal. If discussing energy units saved, it is helpful to put them in context. For example, you might say the facility has saved enough energy to "light up the Astrodome for a week."



Final results and rewards. At the end of a campaign or when any awards or other incentives are given out, inform staff members through simple flyers and E-mail announcements. Results and rewards should be associated with some fanfare, perhaps a ceremony involving top management. Recognize your volunteers with plaques or certificates, and announce the awards and participants in as many venues as possible.

Regardless of the type of information you wish to convey, using a wide variety of communications channels and repeating the same information will increase the likelihood that staff will become aware of the program. Advertising analysts have calculated that people must see an ad seven to ten times before they remember it.

Communications Channels

- Videotapes
- In-house Web cast
- Posters
- Brochures
- Articles in organizational newsletters and local newspapers
- Updates at all-hands-meetings
- Brownbag discussions
- Booth/displays at events
- E-mail reminders
- Web pages
- Information packets for newcomers

Specify Activities

Visible, interactive activities are best to catch attention, involve participation, and reach specific groups. However, well-run activities can require large commitments of time and resources, so make sure you have both before beginning. Examples of short-term and continuing activities include the following examples.

Host displays or exhibits at fairs and other community events. An Energy Fair can be a yearly event, with local utilities, energy service companies, and schools or universities providing exhibits such as alternative fueled vehicles or the latest energy-efficiency and water conservation technologies.

Sponsor a contest related to energy awareness. Contests could solicit logos or other artwork to be used in support of the campaign, energy-efficiency tips from staff, recruitment/pledge activities, or other related efforts.

Organize a desk/laboratory audit program. Volunteers from your team or the facilities management staff can visit workspaces (by invitation or appointment) and provide tips on how to conserve energy (for example, moving obstacles from heating/cooling vents or making better use of day light).

Work with education-oriented groups to design youth/student projects. Excited and involved children can motivate and draw in other family members. Results of the final survey at MCAS Yuma indicate that 42% of housing residents surveyed used energy-

efficient behaviors to set an example for their children. Resources for youth energy issues are available through a number of education organizations. See Appendix IV.

Use Earth Day (April 22) and Energy Awareness Month (October) to highlight the program. Many organizations and offices conduct activities in honor of Earth Day or during Energy Awareness Month. Use this opportunity to exhibit in a fair or host your own; conduct contests and giveaways; give awards for progress to date; roll out posters with new, fresh graphics; or organize community workshops demonstrating efficient activities such as programming a thermostat or using compact fluorescent lights.

Conduct brown bag lunch sessions. Invite local experts such as utility or State Energy Office officials to discuss tips for saving energy and related issues.

Conduct tours of your facility. Show employees how and where they can help save energy around your building. You can also arrange tours of other energy-efficient facilities and residences in your area to give employees even more ideas.

Initiate a commuter choice or ridesharing program. Extend the impact of your energy awareness program by focusing on transportation activities. Consider transit fare subsidies such as passes, vouchers, or other cash reimbursements; accommodations for



bicyclists (bike racks and shower facilities); and non-monetary incentives such as alternative work schedules and flextime, work at home, and carpool and vanpool parking spaces.

Develop a Detailed Budget

In the planning stages, a rough preliminary budget is probably all that is needed or feasible to prepare. But after your program activities are better defined, you will need to carefully reassess your resources and develop a detailed budget to be approved by your organization. You should establish the budgets and obtain approvals as early as possible in the process. Certainly, you must have the budget in place before you begin the program. Your management may ask you to document the return on investment—the cost of the program versus the amount of reduced energy costs you hope to achieve. If the costs of the program exceed the expected energy cost savings, you may have a tough time defending your plan.

Typical Budget Items

Labor

- Obtaining management approvals, identifying necessary resources, and designing the program
- Conducting focus groups and surveys
- Research, writing, editing, designing, and printing information materials
- Creating art, including a logo, graphics, etc.
- Shooting, narrating, and editing a video
- Working with media representatives
- Preparing educational materials for children
- Distributing materials
- Evaluating the program
- Preparing a summary report for top management

Materials

- Paper and services for producing printed materials
- Computer programs, disks, and color printers
- Videotape cartridges
- Display materials for special events

Direct Costs

- Printing
- Give-aways such as refrigerator magnets or coffee mugs
- Incentives for staff members
- Postage for mailing surveys and informational materials
- Food and beverages for focus groups and meetings

Develop a Schedule

A campaign schedule is necessary to keep the work on track. It also keeps the team from missing certain time-dependent events such as Earth Day, Energy Awareness Month, or already-scheduled fairs. (For an example of a schedule for organizing and conducting a single event, such as an Earth Day or Energy Awareness Month celebration, please see Appendix III). The schedule can also take advantage of certain times of year when you wish to reinforce specific actions targeted for change—such as just before heating or cooling season, when reducing peak energy use or saving natural gas may be critical.

Take lead times into account when developing your schedule. For example, deadlines for submitting newspaper or newsletter articles and messages for electronic message boards may range from days to weeks in advance of publication or appearance. If you are orchestrating themes coordinated in several media, allow for approvals, deadlines, and other scheduling issues.

Depending on how energy-usage statistics are tallied at a given facility, there may be a delay before figures such as monthly meter readings and billings are available. If so, factor this time into the schedule. For example, if final campaign results have been promised in December, but energy statistics are only available 30 days after the previous month, you will need to end the data collection with October or November to announce them in December.

Some aspects of a campaign schedule may be inflexible. The ending date may be set by the end of a fiscal year, by the facility's previous energy goals, or Federal goals. If you have flexibility in setting the endpoint, keep in mind that a campaign targeting several behaviors for large facilities may require a minimum of six months, and generally closer to a year, to realize results.



Distribute Information and Carry Out Activities

Once you have planned your activities and announced the program, the really fun part should be carrying out the campaign. In accordance with your schedule, produce and distribute information using the channels of communication you identified. Visible, interactive, inviting activities will help spread your messages, attract participants, and reach specific groups. Provide plenty of reinforcements in the form of colorful, eye catching handouts and giveaways. Keep in mind what motivates people, emphasize personal interactions, and always provide follow-up contacts.

The following examples of activities performed by Federal agencies and laboratories may give you some ideas:

- For DOE's Lawrence Berkeley Laboratory, April is Earth Month. Outside speakers discuss environmental topics, raising awareness of energy efficiency, waste minimization, recycling, and related topics.

- At the Fort Lewis Kids Fest, the energy resource manager staffed an energy education booth and handed out hundreds of giveaway materials donated by local utilities.
- DOE's Waste Isolation Pilot Plant's Energy Awareness Month activities in FY 2000 focused on solar energy with displays primarily provided on loan by Sandia National Laboratory. Demonstrations included solar water pumping, photovoltaics, solar oven and water heating, and lens technology for generating heat.
- One individual at the Department of Justice's Drug Enforcement Administration implemented a low-cost program where energy conservation tips applicable to home and office are distributed monthly. After-hours inspections identify lights and equipment left on, with a stick-on reminder indicating the energy-wasting practice. The rewards are sweet – dozens of homemade chocolate chip cookies each month to employees on the floor with the fewest violations.
- DOE's Oakland Operations Office hosts an annual Energy, Science and Environmental event with co-sponsors General Services Administration and Environmental Protection Agency. Employees of Lawrence Livermore National Laboratory and Sandia National Laboratory also participate in the event, which serves as a family event, science fair, and community education day. Students, employees, and visitors tour dozens of booths that offer hands-on exhibits and examples of recycled materials such as carpets made of shredded plastic bottles and colorful notepads recycled from outdated maps.
- The Department of Health and Human Services sent energy and water conservation posters to components nationwide. A display was set up in the Headquarters main lobby. The highlight of the display was a raffle in which the employees had to answer several energy questions, and winners were drawn from those who answered correctly. Prizes included energy-related hats and mugs, water-savings kits, and compact fluorescent lights.



EVALUATE AND REPORT RESULTS

Evaluating the effectiveness of an energy awareness campaign or program involves measuring the results against the goals. Evaluation enables you to understand the extent to which the expected results were achieved. Perhaps more importantly, evaluation should also reveal what elements of the campaign were effective and which were not—in other words, what worked, what did not, and why. The findings can be used for a mid-course correction or to design future efforts.

Process Evaluation

Persuading people to change their habits is challenging because so many unanticipated external things can influence behavior. Thus, even if you have done your homework to tailor a program to your organization, some surprises are bound to arise along the way. That's where a mid-course evaluation becomes valuable. If you wait until the campaign ends before evaluating it, you may discover that certain aspects of your approach were not effective. By that time, however, you may have lost the opportunity to make changes or corrections. A mid-course evaluation allows you to fine-tune a campaign that is already in progress to better achieve the desired outcomes. In addition, you can shift resources to areas that are working well, while cutting back or eliminating activities that are less effective.

A mid-course evaluation need not be expensive or time-consuming. Several strategic phone calls, personal interviews, or a couple of informational discussions with your team or a group of staff members can reveal much about what's working well, what's not, and why.

If you are using a phone or face-to-face interviews, start with your established contacts—the people who provided input to design the campaign or leaders who are contributing to its implementation. Ask each person if there are others to whom they can refer you who would be willing to answer a few questions. If possible, try to include a diverse group of respondents—both demographically different (men, women, young, older) and from different kinds of workspaces or buildings. Assure them that their responses will help improve the campaign and that no names will be used.

A mid-course correction should provide answers to the following questions

- Are staff members aware of the key elements of the campaign, including incentives, if any?
- Where are they getting their information about the campaign?

- Do they know what they are being asked to do to use energy efficiently?
- Are they doing anything differently now as a result of the campaign, and if so, what?
- Is there anything keeping them from doing these things? If so, what?

In phone interviews or group discussions, listen carefully to what staff members volunteer when they answer questions. Their comments may indicate misunderstandings that need to be corrected, as well as the need for greater emphasis in some areas. At Fort Lewis, for example, many residents said they did not need compact fluorescent lights, thinking that they were only for the fluorescent-type tube fixtures. Though the campaign had encouraged the use of compact fluorescents, people did not understand what they were or that they were available at the base PX. From this finding, future campaign communications placed more emphasis on showing compact fluorescent lights, demonstrating how they fit into various existing fixtures, and reminding people to purchase them on base.

Evaluation of Results

As a minimum, the evaluation for any specific program should investigate two factors: (1) the amount of energy saved, and (2) the extent of people's behavior change that contributed to the savings. Together, these two factors indicate the effectiveness of the program or campaign. The first factor is relatively straightforward to measure by examining before-and-after energy-use data. The second factor is more interpretive, but just as important.

Energy saved. Depending on how data are gathered, you can calculate and present energy use and savings in various ways that make sense for your program. For example, energy savings can be calculated by season, by building type, by different areas, by gas versus electricity, and so on. All data should be corrected for weather and other relevant factors.

Behavior changed. To understand people's behavior change and to what extent the campaign contributed to it, you need direct feedback from employees. At the end of the campaign, you want to understand two fundamental things: (1) to what extent people took actions that reduced energy use (including actions taken), and (2) the effectiveness of various campaign activities and communications in prompting those changes. You may also wish to gauge staff members' willingness to continue their energy-efficient lifestyles.

To learn about these things, ask questions similar to those described in the mid-course evaluation, tailoring them for the end of the campaign. The goal of the evaluation is to understand the effectiveness of the campaign well enough to be able to use or adapt its activities for longer term efforts, eliminating or replacing activities that were ineffective.

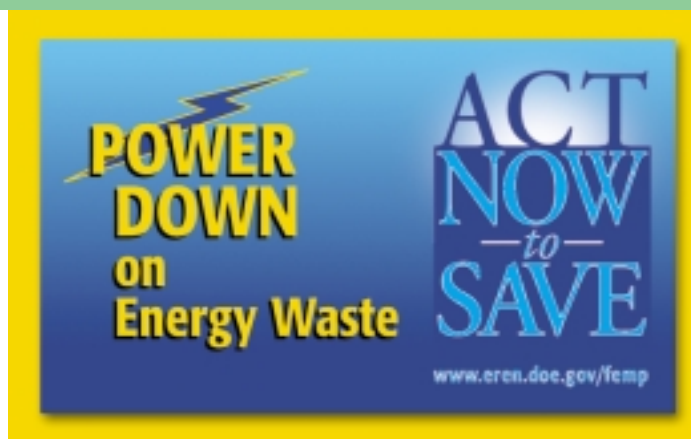
The information received from staff members, combined with other information to which you may have access, helps you put the energy-use data into perspective. You may discover, for example, that one office or lab saved considerably more than others, but not know why until you hear from its staff. You may learn from them that their members were the only ones who received a certain newsletter or had educational projects involving children. You may also discover that they had the highest percent of office audits or signed the most commitment forms promising to take certain energy-saving actions in their homes.

On the other hand, you may discover that staff members who joined the organization after a certain date were unaware of the campaign and consequently did nothing to change. Or perhaps people were enthused at the beginning of the campaign, but as time went on, enthusiasm waned and behaviors reverted. Or perhaps certain behaviors, such as turning down a thermostat, proved uncomfortable or inconvenient over time.

All information gathered is relevant and important. All kinds of findings, both positive and negative, help shed light on the effectiveness and timing of certain campaign activities in contributing to the overall result. With adequate resources and time, the best evaluation uses two methods: quantitative (involving numbers such as energy amounts saved, how many people said what, or number of energy audits requested) and qualitative (interpreting the meaning in what people have said or done). Once the combined data are analyzed and compared, the key findings about the effectiveness of the program will rise to the top. It helps to have various team members conduct this evaluation together and discuss the combined findings to reach a consensus of perspectives.

Reporting on and Publicizing Results

Staff members, your team, and top management will want to know the results of the campaign. Your team will appreciate a separate briefing. Higher level management, U.S. Department of Energy organizations, local utilities, professional scientific societies, schools,



energy coalitions, and working groups may also be interested in the results. All of these people and organizations will also want to know about any follow-up or ongoing efforts.

Reporting can take many different forms, but should be tailored to the audience for which it is intended. For example, communications with staff members may emphasize incentives won, pride, and celebration, as well as the need for ongoing action. Top management may be interested in how to extend or improve on the results to meet future energy conservation goals. The facility's public affairs office may wish to send press releases to local news media, emphasizing local angles such as school or utility involvement. Scientific societies and coalitions may be interested in new or corroborative findings and implications for future studies.

In reporting on campaign results, be prepared to provide or discuss the following:

- Data, visuals, other information, and quotes in various formats and for various audiences.
- Why the campaign was or was not successful and, more importantly, what will be done in the future as a result.
- How the campaign fits into a broader context, such as meeting Federal and military energy goals.
- Implications of upcoming changes that could affect future energy use. Examples are privatization of military housing and increased use of energy savings performance contracts, where contractors upgrade facilities to make them more energy efficient and are paid from the resulting energy cost reductions.

Tailoring the reporting to target audiences will help to ensure a well-received message and a greater probability of a sustained effort over time.

SUSTAIN THE EFFORT

Studies have shown that the most challenging aspect of energy efficiency programs aimed at changing behavior is sustaining new behaviors over time. For a variety of reasons, it is very difficult to change ingrained habits and underlying attitudes. (As evidence, recall how many years it took to persuade people to recycle, wear seatbelts, and exercise regularly—and many people still don't do these things, despite the obvious benefits!) Despite these barriers, both Federal mandates and wise energy-use practices indicate that multiple methods to reduce energy use (and keep costs down) are necessary and beneficial. Technology and upgrades that are proven effective in achieving long-term savings must be augmented with enduring efficiency actions by people if continuing energy goals are to be met.

One campaign, regardless of how effective, is not much help if people revert to their former behaviors when the campaign ends. The following sections give some guidelines for sustained behavior change, based on research findings and programs found to be effective.

Reaching Newcomers

Newcomers to your facility, including new hires and short-term employees, should be targeted to keep awareness high as personnel move in and out of an organization. Newcomers typically receive a package of many different kinds of informational materials, but many do not take the time to read all of them.

Thus, do not rely on printed materials in the orientation package to carry the message about the organization's energy efficiency program.

More effective would be a requirement, as part of orientation, to view an energy efficiency video that models the desired behaviors. Newcomers could receive a personal visit or phone call from an energy manager describing the organization's energy efficiency program and offering assistance.

Self-Motivation/Awards

The underlying principle is that motivation from within (self-directed or intrinsic) has been shown more effective in changing energy-use habits than from an outside source (external), including money. Studies have shown that people obtain a great deal of satisfaction from participating in a worthwhile endeavor and behaving in an ecologically responsible fashion. In addition, environmental programs have found that parents sometimes are motivated to take actions that will make a better world for their children. (Other times, their children will motivate them).

These are exactly the attitudes that a long-term effort must capitalize on to succeed. A long-term efficiency

Key members of NASA's Energy Team receive the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney.

*For more information, please visit:
www.eren.doe.gov/femp.newsevents/pres_awards.html*



effort, therefore, could include reminding employees of the self-satisfaction associated with using energy wisely. The importance of passing along energy efficiency values to children should also be emphasized.

Non-financial, ongoing incentives might include such things as certificates of achievement, public recognition such as having names of energy savers listed in the organization's newsletter, recognition of military personnel by chains of command, the opportunity to be held up as an energy leader or mentor on site, and school award programs. Consider recognizing outstanding contributions by presenting in-house energy management awards. For an example of DOE's in-house awards program, please visit:

www.eren.doe.gov/femp/aboutfemp/doeenergymgt.html.

Or, to nominate your organization or a group of individuals through FEMP's Federal Energy and Water Management Awards program, see:

www.eren.doe.gov/femp/newsevents.html.

To identify effective non-financial incentives, solicit feedback from staff members. Test the effect of the incentives by evaluating savings and behavior change after incentives are made available.

Commitment

Personal commitment to take certain energy-efficiency actions seems to be one of the best techniques for lasting behavior change. In one study, participants who agreed to have their names published as part of the conservation study used 15% less natural gas and 20% less electricity than the control group. The most encouraging finding is that the differences were still significant 12 months later.

Institutionalization

The foundation for fostering enduring energy-efficient behavior must be built on institutionalization in your organization, especially when strengthened by the culture of your Federal agency. This means that regulations, policy, decisions, and behaviors incorporate energy efficiency as a fundamental value, rather than being imposed or added on. At DOE's Golden Field Office, for example, energy efficiency is part of staff performance evaluations. The ultimate outcome is that staff members incorporate energy efficiency into their daily lives by habit and because it is important to them—like keeping their children immunized.

As a Federal Energy Coordinator, you are in a key position to establish and sustain the type of energy program described in this handbook. The implementation of an effective energy awareness program at your facility is by extension an important piece of saving energy and costs throughout the entire Federal sector. The increased knowledge we gain toward improving energy habits and behaviors in the Federal government will extend to the private sector as well. Saving energy is everyone's business, because it benefits everyone. If we in the Federal government can lead by example to increase energy awareness by our actions and practices, we can make a vital difference for our fellow workers and neighbors, for American taxpayers, for our children, and the world.



APPENDIX

Appendix I Designing and Conducting Surveys

If you decide to design and conduct a survey, first make sure you have access to mailing lists and approval to use them. Resources and approvals must also be in place to send and receive mass mailings, as well as enter and analyze survey data. If a mass survey will be conducted, it is helpful to have data-analysis software available. A survey expert may also be valuable in helping design questions, implement the survey, and analyze results. Here are some general guidelines:

- Limit the time required to complete the survey. A telephone survey should not last more than 15 minutes. Limit a printed survey to two pages at the most—one page is better.
- Ask only questions that give you answers you need for your program. Don't waste survey questions on things that are nice to know, but not critical.
- Use clear, simple language. Try to word questions as closed-ended, "check-the-box" alternatives, rather than asking for narrative responses. Put the most important questions up front; some people will tire and drop out before the end. However, put demographic questions, which some may consider sensitive, at the end. Don't ask "double-barreled" questions such as, "Do you turn off the lights in your office and the hallways?"
- Be cautious in asking about attitudes or intentions in energy use. Studies have shown that questions about attitudes ("How important is it for you to conserve energy at work?") and intentions ("Do you plan to change the way you get to work over the next two months?") are notoriously inaccurate indicators of actual behavior. Thus, even if you measure increased positive attitudes or intentions as a result of your awareness program, you may not have changed any behaviors or reduced energy use.
- If you want to group the responses by certain categories, make sure you ask appropriate questions that will allow you to make comparisons (i.e., different types of offices, spaces with different HVAC equipment, or people who work different shifts).
- A printed survey or phone survey should indicate who is conducting the survey and how the information

provided will be used. Ensure anonymity. In a printed survey, give a deadline for responding. Consider using incentives, such as offering the first 100 respondents a small prize. Follow-up reminders may also increase the response rate.

- Pretest your survey questionnaire with a few employees and officials before using it on a broader group. Ask them to read the questions and tell you what they think of them. This will help you identify any questions that are confusing, worded incorrectly, or not applicable to building occupants.

Aim for a response rate of 40% for results that may be used to draw general conclusions about the people in your facility. A lower response rate is still valuable for designing and implementing the program.



Appendix II FEMP's "You Have the Power" Awareness Campaign

To foster energy awareness across the Federal government, FEMP launched a communications campaign entitled "You Have the Power" in 1997. This campaign assists Federal energy coordinators by spreading the word about energy efficient practices and products through colorful artwork, posters, and handout materials. The campaign focuses on Energy Champions, individuals doing extraordinary things to save energy, money, and resources for American taxpayers.

The “You Have the Power” campaign logo and core graphic illustrate the power of the individual to make a world of difference by positioning a human hand holding the planet earth. You may request this artwork and other campaign graphics to use in developing your own customized outreach materials. When customizing your materials with the “You Have the Power” logo and graphics, please make sure you provide the following or a similar statement, “Original artwork courtesy of the Federal Energy Management Program, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy.” Please contact Annie Haskins at annie.haskins@ee.doe.gov for a copy of a CD containing high resolution art files.

To request printed copies of the latest posters and handout materials developed by the campaign, please contact the U.S. Department of Energy’s Energy Efficiency and Renewable Energy Clearinghouse at
1-800-363-3732

or on-line at

www.eren.doe.gov/femp/ordermaterials.html#awareness.

Quantities are limited.

Appendix III

Steps for Sponsoring a Special Event

The following timeline presents a series of steps to prepare for a special event, such as an Earth Day celebration or an Energy Awareness Month rally. It is illustrative only. Your timelines and participants will, of course, be unique to your own campaign activity.

Formulate the Event (six weeks prior to event)

Where?

Main lobby of your building, public park, City Hall

When?

Early morning breakfast meeting, lunch address, end-of-day celebration

Objective?

Tie to new announcement, personnel awards, or stand-alone activity

Who?

The Governor, the Secretary, the Commander, energy staff, utility executives

What?

Speech, announcement, unveiling, demonstrations, display, media advisory

Plan the Event (at least four weeks prior to event)

- Obtain necessary approvals and clearances from facility managers, administrators.
- Reserve spaces and locations.
- Send out notices and invitations.
- Coordinate schedules with speakers, VIPs, business leaders, etc.
- Customize and collect awareness materials for display and distribution, such as banners, posters, and handout items.
- Contact the media to cover the event and encourage their involvement.

Finalize the Details (two weeks prior to the event)

- Complete the production of print materials and other handouts.
- Confirm appearance of speakers and VIPs, follow up with schedules to confirm details.
- Review talking points, schedule of activity, catering, and other logistics.
- Publicize the event through E-mails, flyers, newsletters, handouts, Web sites, and bulletin boards.
- Check delivery and placement of all seating, displays, and related elements.

Prepare the Logistics (one week prior to event)

- Secure banner installations, display panels, exhibits, and related set up considerations.
- Assemble handout material, arrange delivery, secure storage.
- Arrange placement of podium, chairs, tables, other.
- Confirm final attendance numbers for guests, media, speakers, and audience.

Hold the Event

- Record the event by video, still photo, and/or audio.
- Make notes about what worked well and what could be improved.
- Publicly thank everyone who contributed, supported, funded, and participated.

Follow up

- Clean up site and return borrowed items in a timely fashion.
- Remove and store materials properly for future use.
- Publicize the event in newsletters, Web site, interoffice memos.
- Write thank-you letters.
- Follow up with the media.
- Meet with your team and discuss your event.
- Begin planning for your next event.

APPENDIX

Appendix IV Energy Education Web Sites

Alliance to Save Energy Green Schools

Helps schools use energy efficiently through building retrofits, changes in operational and maintenance outlines, and changes in behavior of building users

www.ase.org/greenschools

California Energy Commission's Bright Schools

Provides schools with information on energy efficiency upgrades and how to pay for them

www.energy.ca.gov/efficiency/brightschoools

Educational Energy Manager's Association of Florida

Fosters and promotes energy awareness through education, study, discussion, and networking

www.eemaf.org

Energy Star® for Schools

Helps school districts link energy, financial, and environmental performance by providing tools, software, and informational resources

www.energystar.gov

Energy Quest

Award-winning site on energy education for students, parents, and teachers

www.energy.ca.gov/education

Florida Solar Energy Center

Partners with industry, nonprofit organizations, private sponsors, and national laboratories to research energy technologies and educate the public

www.fsec.ucf.edu

Interstate Renewable Energy Council

Promotes the sustainable use of renewable energy sources and technologies through state and local government activities

www.irecusa.org

National Clearinghouse for Educational Facilities

Provides information and resources for people who plan, design, build, and maintain K-12 schools

www.edfacilities.org

National Energy Education Development

Develops and distributes comprehensive energy education programs through its network of students, educators, business, government, and community leaders

www.need.org

National Energy Foundation

Develops and disseminates educational materials and implements teacher and student training programs to increase understanding of energy, natural resources, and the environment

www.nef1.org

National Science Foundation

Partners with academia, industry, and state and local governments to advance science, engineering, mathematics, and technology

www.nsf.gov

National Science Teachers Association

Promotes excellence and innovation in science teaching and learning

www.nsta.org

Schools Going Solar

Shares new of schools using solar energy

www.schoolsgoingsolar.org

Appendix V

Federal Energy Management and Awareness Web Sites

Federal Web sites offering energy efficiency and renewable energy information, tools, products, statistics, and solutions

Federal Energy Management Program

www.eren.doe.gov/femp

Office of Building Technology, State and Community Programs

www.buildings.gov

Energy Information Administration

www.eia.doe.gov

ENERGY STAR®

www.energystar.gov

Some other Federal agency Web sites offering information on their energy efficiency programs and policies

U.S. Department of Agriculture

www.usda.gov/energy/

U.S. Department of Housing and Urban Development

www.hud.gov/offices/cpd/energyenviron/energy/

U.S. Department of the Interior

www.doi.gov/pam/#ene

U.S. Department of the Navy

energy.navy.mil/

U.S. Department of the Treasury

www.treas.gov/assetman/environment.htm

Selected U.S. Department of Energy National Laboratories Web sites containing helpful information

Lawrence Berkeley National Laboratory

www.lbl.gov

National Renewable Energy Laboratory

www.nrel.gov

Oak Ridge National Laboratory

www.ornl.gov

Pacific Northwest National Laboratory

www.pnl.gov

Sandia National Laboratory

www.snl.gov



The mission of the Department of Energy's
Federal Energy Management Program (FEMP)
is to reduce the cost and environmental impact of the
Federal government by advancing energy efficiency and
water conservation, promoting the use of distributed
and renewable energy, and improving
utility management decisions
at Federal sites.



Federal Energy Management Program
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

For more information, or to order materials contact the FEMP Help Desk at
800-363-3732
or visit us at
www.eren.doe.gov/femp

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